

The Guardian

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THE STEADY SUBSCRIBER

How dear to our hearts is the steady subscriber,
Who pays in advance at the birth of each year:
Who lays down the money and does it quite gladly,
And casts round the office a halo of cheer.

He never says: "Stop it; I can not afford it;
I'm getting more journals than now I can read."
But always says: "Send it; all readers like it—
In fact, we all think it a help and a need."

How welcome his check when it reaches our sanctum;
How it makes our pulse throb; how it makes our hearts dance;
We outwardly thank him; we inwardly bless him,
The steady subscriber who pays in advance.

—Exchange.

HIGHWAY NEEDED

The people of Gila county have just voted on a \$500,000 road bond issue, which was carried by a vote of three to one. The people of Greenlee county authorized the issue of road bonds some time ago and is now completing a fine highway to the Graham county line.

Gila county will begin work at once on a highway to the Graham county line. So, in a short time, both Greenlee and Gila counties will have fine highways for travel of all kinds and little old Graham, lying between and connecting both, will be the same old mud hole and source of disappointment to the progressive people of Gila and Greenlee counties as she has always been.

Good roads are absolutely needed in this county, where so much travel by roads is necessary, and yet the people of this county are now lagging far in the rear of all other counties in the State when it comes to good roads.

We will not allow ourselves to believe that the people of Graham county intend to remain very long in the rear of the progressive procession and we feel that it will not be long before an election will be held for the purpose of authorizing a bond issue for the building of a highway through Graham county, as well as good roads for feeders to the highway.

There are just two counties in the whole State that are behind all other counties in the making of good roads, and one of these laggards is Graham county. Let us get busy—every business man, every farmer—and start the work of completing a good highway from Greenlee to Gila counties and get out of the rear to the head of the progressive procession, where we rightfully belong.

Let us agitate the question of good roads from now until the day the work is accomplished. Let us all stay on the job until the highway is completed from Greenlee to Gila, with a better road, if possible, than any yet built in any part of the State.

We should not be pikers when it comes to having the best highway in the State.

SEMI-ANNUAL TAXES

The passing of the bill by the legislature, providing for the semi-annual payment of taxes, is causing considerable confusion in the office of the tax collector, both through the misunderstanding on the part of the taxpayers as to the time for payments and because of the necessity of revising the account books of that office.

Beginning with this year, taxes are payable in two payments, though they may be paid in full at the time the first payment is due, if so desired. The first installment must be paid on or before the first Monday in November (November 8th of this year), after which date the first installment becomes delinquent and penalties are added when paid. School, poll and road tax must be paid with the first installment unless the taxpayer is exempt by law.

The second installment must be paid on or before the first Monday

installment becomes delinquent and the usual penalties are added.

Delinquent penalties for the non-payment of taxes are: Interest at the rate of 10 per cent per annum; a tax collector's fee of 4 per cent and a clerk's fee of 15 per cent for each tract of land or town lot, separately assessed.

Six months after the second installment becomes delinquent, the tax collector must file suit in the superior court of the county to condemn and sell the property for taxes and costs. Court costs and sheriff's fees must be charged as costs and paid by the person redeeming the property.

CLEAN-UP DAY

The fourth Thursday in every month has been selected by the town council as "Clean-up Day," when all citizens will get busy and clean up their premises. For the purpose of keeping the town clean and healthy, "Clean-up Day" should become popular with every citizen.

For several months yet we will have the pestilent fly to deal with and there is no better way to rid the community of this germ carrying pest than to destroy its breeding places. This is easily accomplished by keeping your premises clean; your front and back yards free from weeds.

If you keep a horse or cow, see that the manure is hauled away regularly and thus prevent the breeding of flies.

To carry out the plan for a cleaner town, the town council suggests that every business man should procure a fly trap and keep it in front of his business place. These traps can be made cheaply and will aid materially in keeping the town free from flies.

MORE TROOPS FOR BORDER

The conditions along the border in Arizona and Texas caused by raids of Mexican bandits have become so serious that the war department finds it necessary to send more troops for patrol duty.

On the Texas border, the Mexican bandits have crossed at several places and raided ranches. A regiment of infantry has been sent to General Funston at Brownsville, Texas, and an aeroplane from Fort Sill, Okla., were ordered to the border.

Carranza soldiers have crossed the border to Arizona and run off cattle and there was a riot at Nogales, in which American soldiers and civilians participated, resulting in the Mexicans being driven across the line. One American was killed and ten Mexicans reported injured.

MILITARY TRAINING

The best way to prevent war is to be prepared for war and it is not a bad idea to train all citizens up to 50 years of age, how to handle arms, march, dig trenches and other military duties that will be necessary to perform and which they should know if called to the colors to protect their country.

A company of the national guard is being organized in Graham county at the present time with everything favorable to starting out with a full quota of men. The training that the men will receive will be worth the time they will give to their military duties.

"TUCSON IN 1915"

The Tucson Star got out a splendid edition of 56 pages, Sunday, August 15th, under the title, "Tucson in 1915."

The edition was full of news for the home seeker, as well as for the pleasure seeker, the traveler and the health seeker.

Many articles telling of Tucson's advantages in 1915 and numerous illustrations are contained in the issue and will be read with interest by people who are seeking an ideal place in which to live.

Did you ever notice that cows have their likes and dislikes? If you have you will have observed that some cows will take more kindly to some persons than to others. We have in mind a cow that prefers to have a certain person milk her and when she hears his voice in the barn she refuses to be milked by anyone else. It is the meeting of these notions and desires of the cow that produces the very best results. But how few persons think it worth while to meet the affectionate demands of this dumb mother.—Hoard's Dairyman.

The dog gone dogs are still rambling around the town, day and night, and are a great nuisance.

Tenth street, from K to L streets, has been graded and graveled, making a very fine improvement on the west end of town. The cement culverts across Tenth street at L street, have also been completed. The next improvement on these two blocks, and one which is badly needed, is the removal of weeds and grass in the gutters and on the sidewalks.

A Pittsburg girl was badly frightened a few days ago when a horse standing by the curb attempted to bite the green stockings showing under the hem of her very short skirt. Of course, it was an audacious act on the part of the horse but he did not know that all is not grass that looks green.

Safford should have a sewer system as soon as possible and it would be a very good idea if the Chamber of Commerce would take up the matter and appoint a committee to go into the matter fully as to cost, the kind of system needed and how soon it could be accomplished.

If one energetic fly can produce by September 10th, 5,598,729,000, 000 flies, how many flies will one pile of manure produce?

The Safford Schools will open Monday, September 13th.

THE LINCOLN MEMORIAL

The Lincoln Memorial, now under construction in Washington, will be the costliest monument ever erected to the memory of one man. Its cost will be \$2,000,000. The Washington correspondent of the Boston Transcript, describing the plans of the architect, says:

The memorial will stand on a broad terrace, forty feet above grade, and with a radius of 1,000 feet. It will be of pure Colorado marble. The colonnade, on all four sides, 188 feet long and 118 feet wide, will contain thirty-eight columns forty-four feet high, and seven feet, five inches in diameter at the base. The great central hall will be sixty feet wide and high, and seventy feet long. In the center will stand a heroic statue of Lincoln. The lighting scheme is unique—the only light admitted to the chamber is to come through marble panels, one inch in thickness, set in the ceiling.

Each panel is two by four feet, and each series of three panels will be divided by bronze beams, four feet deep, worked in oak and laurel-leaf designs. The rays from lamps or sun will fall softly upon the head of the martyred President, as like as human genius can conceive it to the "light that never was on sea or land."

On the north wall, set in an immense marble tablet with bronze letter, will be Lincoln's second inaugural address. From the south wall, in the same design, will stand forth the immortal phrases of the Gettysburg speech. Before each tablet will be set four pillars, so placed as to give the effect of dividing the hall into separate chambers, and making that in which the statue stands an inner shrine.

The plans show a lagoon extending in front of the memorial 2,000 feet toward the Washington Monument. The work will probably be completed in the spring of 1918.

FIRST STEEL CAR

The first steel passenger car ever built in the United States is on display in the Southern Pacific's exhibit in the transportation building at the Panama-Pacific Exposition. It is coach No. 1,806. This car is a product of western brains, having been designed in the company's offices at San Francisco and built at Sacramento in 1906.

Since that time the development of the steel coach has been rapid. The Southern Pacific Company, according to General Superintendent of Motive Power T. W. Heintzleman, now has almost 900 all-steel passenger cars, none of any other material having been built for the last seven years. Altogether the company has a total of 5,156 steel cars of all descriptions; these including 147 all-steel baggage, 38 motor and 187 suburban electric cars. The main line coaches are 60 feet long and seat 72 persons.

The new cars are fitted with high speed brakes of new design and have powerfully reinforced vestibules. They are lined in mahogany finish and are steam heated. Their advantages combine comfortable riding qualities and safety.

HARD PROPOSITION

There was a brigadier-general in the Civil War who was so earnest in his religious efforts that in a short time he had converted every man in the brigade except one hardened teamster. Going to his commander one day this man said, solemnly: "General, I am lonesome. Every man in the camp has been converted except me. I suppose it's the right thing, but I don't see how I can manage it."

"Why, my good fellow," said the general, "I see no difficulty in the way of it, if you will just surrender your own will and ask for guidance."

"That's just it, general," said the teamster. "If I am converted, who in blazes is going to drive them mules?"—The Philadelphia Public

Now For One Mighty Swat!



Photo by American Press Association.

LUBRICATING OILS

Interesting Points on the Science of Lubrication by Lieut. Bryan, U. S. N.

Few motorists know what lubrication really means, or can tell just what happens when the oil strikes the hot cylinder walls, and how it is affected. An article by Lieutenant G. S. Bryan, U. S. N., published in the February Journal of the American Society of Naval Engineers, throws considerable light on the subject. He says in part:

"The lubricating value of an oil is due to the fact that when the surfaces of the cylinder and piston are separated by a film of oil the friction of these two metal surfaces is eliminated and the friction that remains is only that occasioned by the sliding action of the molecules of oil past each other. In other words, it is the same as if two layers of oil are sliding past each other, and the friction that occurs takes place inside the oil film and not on the surface between the film and the metal. In other words, we have a dual film-oil working against oil."

"Under the conditions of high rubbing speed and small piston ring pressure that are generally found in motor cylinders, light oils, such as are used in turbines, would probably give the most efficient results if it were not for the high temperatures encountered in the cylinders. "Before discussing the effect of these high temperatures, it will be well to determine just what they are. Recent experiments abroad have shown that the maximum temperature attained in an internal combustion engine is about 2,700 degrees F. This is the maximum and is obtained only at the top of the explosion stroke."

"A recording thermometer used in the above investigation showed that the maximum temperature was about 2,700 degrees F., the minimum about 250 degrees F., and the average during a complete cycle about 950 degrees F. These temperatures are those of gases in the cylinders and are not those of the cylinder walls. There is a greater difference between the temperatures of these two. As long as the water is not boiling we know that the temperature of the wall is little, if any, higher than 267 degrees F."

"It naturally follows that the inner and outer surfaces of the oil film will be exposed to quite different conditions. The inner surface is exposed to the high temperature of combustion, and without doubt is very greatly damaged thereby. The outer surface is exposed only to the comparatively low temperature of the cylinder walls, and with a film of any appreciable thickness would be protected from the heat due to low conductivity of this film."

"We can consider the film as consisting of two layers, the function of one of these being to furnish the lubrication, and of the other being to withstand the destructive action of heat and to protect this lubricating layer. It is well known that an exceedingly thin layer will furnish lubrication, and it is probable that the greater part of the thickness of the film is used up in giving the requisite protective action from the heat. At any rate the part that we must look to for lubrication is that part having the lowest temperature, which is the very thin layer next the cylinder walls."

"Lubricating oils does not burn very easily or very fast, however, and time given for it to burn in a motor cylinder is very short. Under the intense heat, however, the inner surface of the oil film will be vigorously affected."

"Some oils form a thick, viscous, gummy deposit, which retains the carbon formed on its surface and prevents it from being blown out through the exhaust. This gummy deposit gradually gets thicker and

carbon deposit so well known in cylinders.

"Oils made from asphalt-base crudes have shown themselves to be much better adapted to motor cylinders, as far as their carbon-forming proclivities are concerned, than are the paraffine-base Pennsylvania oils. The carbon formed from the latter is, as a rule, extremely hard and clings to the metal surface while that from the former is soft and can easily be wiped off any surface that it is deposited on. This would be expected from a consideration of the nature of the hydrocarbon composing the oil, and it has also been demonstrated in practice."

"The explanation lies in the fact that the paraffine-base oils are generally composed of the paraffine series of hydrocarbons, while the asphalt-base oils are composed mainly of the ethylene and naphthene series. One of the characteristics of the latter two series as compared with the paraffine series is their tendency to distill without decomposition. Consequently no gum will be formed on the cylinder walls, and the carbon liberated will be mostly discharged with the exhaust gases."

SUDAN GRASS

I have had several years experience in growing sudan grass and have found it to be a very valuable hay or forage crop. It is equal to the best of other grasses in feeding value and is better than many of them. It is relished by stock and there is practically no waste in feeding it, says A. L. Paschall, Farm Advisor for Cochise and Santa Cruz Counties, U. of A. Agricultural Extension Service and United States Department of Agriculture. It is one of the best, if not the best, drought resisting and drought evasive forage plants known.

A recent Texas Station Bulletin states that the average yield of Sudan grass hay from 20 tests of four different sub-stations, was 7,656 pounds per acre. In cured hay it ranged from two to six tons per acre. Its acre-feeding value is more than twice that of Johnson grass. The Ohio Station found that its acre-feeding value is twice that of timothy.

This crop is admirably adapted to Arizona conditions and should be more extensively grown. It is also valuable as a feed crop, yielding from 400 to 950 pounds per acre.

BEST OF ALL

An Iowa family had located in sunny Arizona and were very happy with their surroundings, but the mother noticed, with regret, that her young son had lost all interest in his native State, while she wished him always to remember lovingly the land of his birth. One day calling him to her, she said:

"Son, sit down and listen, while I read you a few lines from a speech delivered at Des Moines, Iowa, by Dr. Newell Dwight Hillis, pastor of Plymouth Church, Brooklyn" (who had also been an Iowa boy).

The mother read: "Young man, don't leave your State thinking there is a better country in the East or West. God Almighty smiled when he made New York and Seattle, but he laughed outright with his blessing when he made Iowa."

The lad springing to his feet, shouted, "H'm, I'll bet God just roared when he made Arizona."

Is Sickness a Sin?

If not, it's wicked to neglect illness and means of relief. It's wicked to endure liver ills, headache, indigestion, constipation, when one dose of Po-Do-Lax gives relief. Po-Do-Lax is Podophyllin (May Apple), without the gripe. It arouses the liver, increases the flow of bile—nature's antiseptic in the bowels. Your constipation and other ills disappear overnight because Po-Do-Lax has helped nature to remove the cause. Get a bottle from your druggist today. Get rid of your constipation overnight. adv-no3

Are you a member of the

Behind This Bank

is a service that is prompt and sure, fair in its dealings, keen to learn the needs of its customers and eager to make its interests their own. We have every department known to banking, and our full resources of experience and equipment are at your disposal. We solicit your patronage on the ground of deserving it.

The Bank of Safford

A HOME INSTITUTION
SAFFORD, ARIZONA

A VACATION SUGGESTION

See your nearest ticket agent and buy an Exposition ticket to San Francisco.

On your going trip stop-over at Los Angeles and take trips to Ocean Park and Venice, Southern California's most popular beach resorts, San Diego, the "Exposition City," Catalina Island—the "Gem of the Pacific."

Stop-over at Santa Barbara—the Mission City, and at Paso Robles—California's famous inland watering place.

Stop-over at Castrolville and take a trip to Del Monte with its beautiful Hotel, Park, 17-mile drive and 49-mile scenic boulevard.

Stop-over at Santa Cruz, the "Atlantic City of the West" and take a trip to the Big Trees—one of the world's wonders.

Stop-over at Palo Alto—the seat of Leland Stanford University.

Spend at least two weeks in San Francisco viewing the Exposition and take short side trips to—

Berkeley—the home of the University of California, with its celebrated Greek Theatre.

Mount Tamalpais over the "Crookedest Railroad in the World."

Lake Tahoe—A mile high in the mountains.

On your return trip—

Stop-over at Merced and take a trip to Yosemite Park—one of Uncle Sam's grandest National parks, reserved for you as a playground.

THE FARE TO SAN FRANCISCO AND RETURN IS ONLY

\$48.25

CLOSING OUT

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Hardware and Harness

AT BARGAINS

We have the best General Merchandise and all kinds of Groceries, marked down to Lower Prices for Cash, and we give you part of our profits.

P. J. JACOBSON, SAFFORD

Safford Ice and Creamery Company

Safford, Arizona

CRYSTAL ICE, BUTTER, PASTEURIZED
CREAM AND CREAMERY SUPPLIES

Agents for De Laval Separators

HIGHEST CASH PRICE PAID FOR

...BUTTER FAT...

Electric Rates

GILA VALLEY ELECTRIC, GAS AND WATER CO.
SAFFORD, ARIZONA

Lighting Rates

For a monthly consumption of 6.66 KWH or less \$1.00

All in excess of 6.66 KWH consumed in one month \$15 per KWH

Electric current for electric irons, electric fans and other electric appliances, if taken from the lighting circuit, will be charged for at the lighting rates, provided, however, that a consumer may avail himself of a cheaper rate by installing, at his own expense, a separate circuit and meter, in which case the following rates will apply:

Current for Electric Irons, Fans, Etc.

For the first 15 KWH consumed in any one month \$12 1-2 per KWH

For the next 15 KWH consumed in any one month \$10 per KWH

All in excess of 30 KWH consumed in any one month \$9 per KWH

Power Rates, Day Service

For the first 100 KWH consumed in any one month \$10 per KWH

For the next 100 KWH consumed in any one month \$8 per KWH

For the next 250 KWH consumed in any one month \$7 per KWH

For the next 250 KWH consumed in any one month \$6 per KWH

For the next 300 KWH consumed in any one month \$4 per KWH

All in excess of 1,000 KWH consumed in any one month \$3 1-2 per KWH

A monthly minimum charge of \$1.00 for one horse power or less, and 50 cents for each additional horse power of connecting load shall be made. This minimum, however, shall not be charged in addition to the above charges for current.

Sign Lighting

Special rates can be had for sign lighting by applying to the office of the Company.

THE GUARDIAN FOR FINE BOOK PRINTING